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Title Page

What is 'effective' CPD for contemporary physical education teachers? A Deweyan framework

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Abstract

It is widely argued that continuing professional development (CPD) for physical education (PE) teachers is important, yet questions remain about 'effective' CPD. We consider these questions afresh from a Deweyan perspective. An overview of the CPD/PE-CPD literature reveals conflicting positions on teachers as learners. Considering the nature of contemporary PE, and the learning needs of teachers, we argue that a different model of PE-CPD is required to reflect the dynamic nature of contemporary practice. We propose John Dewey's classic concept of 'education as growth' to underpin a new conceptual framework for the design, delivery and evaluation of PE-CPD. We argue that 'effective' PE-CPD will not be found in formal policies, structures and processes, however well-intentioned , unless it (i) focuses on the dazzling complexity of the learning process, (ii) prioritises context and contemporary challenges; (iii) bridges research/theory-practice in innovative ways; and (iv) nurtures the career-long growth of PE teachers.

Key words: teacher learning; contemporary learners; John Dewey; education as growth; lifelong learning

Word count: 8256

It is difficult to argue against claims that continuing professional development (CPD) should "meet the continuing needs of teachers as learners in a changing society" (Dadds, 2014, p. 9), nor that it should be "capable, agile and sustainable" (Department of Education and Training Queensland 2011, p. 21). In the large body of international research on raising educational standards, the emphasis is on CPD that is focussed on teachers' learning and that links knowledge and practice in ways that support professional and pedagogical growth (Darling-Hammond, 2006). There is also a growing literature on CPD for physical education teachers (PE-CPD) that largely mirror the theories, concepts and research findings in other areas of education (Armour & Makopoulou, 2012; Parker, Patton & Pratt, 2013). Yet, there is also recognition that despite decades of research, there remains little robust evidence to support definitive claims about what constitutes 'effective' CPD (Hill, Beisiegel & Jacob, 2013). A dictionary definition states that to be described as 'effective', something must be successful in producing a desired or intended result. Yet, this rather bland definition masks complex – and vital – questions about whose intentions are to be considered valid, why, and in what contexts. Certainly, the existing body of research on CPD effectiveness has found that from a formal – or CPD producer/provider – perspective, intended goals of CPD are rarely met as envisaged, suggesting that something is amiss with either the goals themselves, the process, the providers or the teachers.

Although numerous different CPD types, models and processes have been proposed, promoted and evaluated, critical questions have been raised about each of them. Moreover, most large-scale studies of the impact of CPD initiatives on specific aspects of teacher and pupil learning have produced inconclusive results (Hill et al., 2013). So, the question to be considered in this paper is: where next for CPD policy, research and practice in the context of contemporary PE? In order to consider this question, we argue for a pause in the frenetic rush to find practical models of 'effective' CPD that will 'work' because it seems clear that this approach has not served the

profession well. Despite the well-intentioned efforts of CPD providers, teachers have demonstrated time and again that they are able to resist and reject the learning outcomes that others plan for them.

Instead, therefore, we return to the seminal writings of John Dewey and, in particular, his theory of education as 'growth', (1916, 1938a) to guide us towards thinking differently about the nature of effective PE-CPD. Dewey is considered to be one of the most influential philosophers and thinkers in the field of education and in contrast to many other social theorists, learning and education were always at the heart of his work (Biesta & Burbules, 2003; Garrison, 2001). His theories centred on children and their experiences as learners who reflect, interact, learn and grow in schools as part of larger democratic communities, and in relation to CPD, Dewey offers a different conceptual starting point for considering PE-CPD. The purpose of the article is accordingly to explore the contradictions in CPD policy and research, and re-consider the conceptualisation of 'effective' CPD for teachers.

The article is organised into three main sections. In the first section we provide an overview of the existing research on the challenges of identifying universal features of effective CPD and PE-CPD. In section two, we consider the needs of contemporary learners in PE, including both teachers and children, and implications for the design of CPD. In section three, we re-examine John Dewey's concept of education as growth (1916; 1938a; 1938b), using Dewey's theoretical lens as a form of 'Ariadne's thread' to help us to navigate the labyrinth of contradictions in CPD policy and research. In our conclusions we consider potential implications of placing 'education as growth' at the heart of our quest to develop 'effective' CPD for contemporary PE teachers.

Section one: 'effective' PE-CPD

In both general education and the PE-specific literature, there is widespread agreement that high quality teaching is central to raising the standard of pupils' learning, and that CPD for teachers is an important component of educational success (Darling-Hammond et al., 2009; Atencio, Jess &

Dewar, 2011). It is unsurprising, therefore, that over the last two decades; research interest in CPD has grown, particularly in seeking to find out what makes different forms of CPD more or less 'effective'. CPD has been conceptualised in a plethora of ways but there is some consensus in the literature that it should be a seamless, continuous, career-long process and at least partially embedded in teachers' daily work activities (Desimone, 2011). Yet, at the same time, there are strong critiques of existing models of CPD (e.g. Webster-Wright, 2009) and, perhaps most concerning of all from a 'what works' experimental research perspective, several large scale studies have failed to find clear links between specific CPD activities and measurable improvements in pupils' learning (Goodall et al., 2005). In other words, it would appear that CPD is widely regarded as worthy, but finding a design/process that is optimally efficient and effective remains elusive.

It has been argued that the emergence of the concept of 'CPD' in recent years has signalled a shift away from what were perceived to be narrow understandings of in-service teacher 'training' (OFSTED, 2006). For example, at the practice level in PE-CPD, Tannehill et al (2015, p. 94) identify a wide range of relevant CPD activities including: "regularly attending workshops and annual professional conferences, participating in staff development programs, reading professional journals and books, pursuing an advanced degree and maintaining professional contacts at other schools and in the community".

At the formal policy level, definitions of CPD vary but the following example from the Teaching Council of Ireland (2011) is typical in that it presents an idealized view of teacher learning as a smooth continuum:

> The continuum of teacher education describes those formal and informal educational and developmental activities in which teachers engage, as lifelong learners, during their teaching career. It encompasses initial teacher education, induction, early and continuing professional development and, indeed, late career support, with each stage merging seamlessly into the next and interconnecting in a dynamic way with each of the others (p. 5).

This notion of a learning continuum is interesting, given that so few education systems are structured in ways that could support teachers in this manner. As the European Commission expressed it recently: 'the fragmentation of responsibilities for ITE, induction and CPD hinders the development of a long term system strategy and implementation policy' (2014, p.4).

The definition also articulates another idealised view: that of teachers who are 'lifelong learners'. The implicit suggestion is that without CPD, teachers might stop learning at some point in their lives or careers or, perhaps more likely, they will stop learning what someone else has determined they should learn. Yet, as the Organisation for Economic and Cultural Development [OECD] expressed it in 2005, lifelong learning is 'a ubiquitous feature of life' rather than "a special kind of activity that happens from time to time in special places" (Claxton & Lucas, 2009, p. 5). In other words, from this perspective, teachers will learn (something) no matter what they do in formal CPD. Moreover, there is little evidence to suggest that education systems have programmes in place that could come close to meeting the complex and progressive learning needs of teachers over their whole careers, despite the ways in which CPD policies are articulated (Armour, Makopoulou & Chambers, 2012; Cordingley, 2015; Ko, Wallhead & Ward, 2006).

There are various CPD goals evident in the international research literature ranging from the fulfilment of system-wide goals to meeting teachers' individual aspirations. de Vries and colleagues (2014) for example, suggest that CPD should include offering teachers opportunities to update their knowledge and skills, engage in reflection, and collaborate with colleagues. The underlining, tacit commitment (at least in rhetoric) is to support teachers to develop a set of qualities that will enable them to be innovative, to "review evidence of effective practice and [to] engage with current innovation and research in order to keep pace with the evolving knowledge

society" (European Commission, 2004, p. 2-3). In this context, use of the phrase 'keeping pace' is interesting; the assumption seems to be that teachers will routinely be 'off the pace', that important knowledge is created elsewhere, and that the function of CPD is to *inform* teachers about it. From this perspective, 'effective' CPD appears to be primarily about the success of information-giving activities.

An alternative view is that effective CPD systems should support teacher agency (James, McCormick & Black, 2007). As Peterson et al. (1996) have argued:

> Changing practice is primarily a problem of teacher learning, not a problem of organisation … School structures can provide opportunities for the learning of new teaching practices and new strategies for student learning, but structures, by themselves do not cause learning to occur (p. 149).

There is, however, an extensive body of literature on different structures and models of CPD and their relative effectiveness. For example, in his seminal work, Guskey (1994) argued that CPD should be integrated, systematic, coordinated and progressive, and the ideal of offering progressive CPD is widely advocated. As James et al (2007, p. 63) in their research in the UK concluded, "continuous and progressive professional development will have more lasting value" although, in practice, it would appear there are challenges in providing CPD that is either continuous or progressive. Indeed, in a McKinsey report entitled '*Breaking the habit of ineffective professional development for teachers'*, Jayaram, Moffit and Scott (2012) suggest there are at least five major strategies that are needed to deliver effective CPD; having a vision of effective teaching, being strategic, prioritising coaching and ensuring CPD meets teachers' needs and has impact. Although it is difficult to argue with any of these points, it is also difficult to see how the report adds many new insights on effective CPD strategies. As we have previously reported, despite such knowledge being available for some time, the literature suggests that most existing CPD fails to act on it (Armour, Makopoulou & Chambers, 2012; European Commission, 2014; Ko, Wallhead & Ward, 2006).

There is widespread support throughout the general and PE-specific CPD literature for social constructivist approaches to learning and developing communities of practice (CoP) or professional learning communities (PLCs) within which teachers learn, support each other and develop new practices (Desimone, 2011; Chambers et al., 2012; Armour; O'Sullivan, 2007; Parker, Patton & Tannehill, 2012). Indeed, after conducting extensive research in the USA, Lieberman and Miller (2008, p. 106) claimed that "professional learning communities … hold the promise of transforming teaching and learning for both the educators and students in our schools". There is also some evidence of the effectiveness of CoPs in PE (e.g Armour & Makopoulou, 2012, Jess & McEvilly, 2013; Goodyear & Casey, 2013). Yet Watson (2014) urges some caution, arguing that the term 'PLC' has been used as a kind of catch all phrase that has lost much of its original meaning. Moreover, considerable challenges remain in both developing and sustaining teachers' CoPs in school contexts that are not necessarily supportive and in finding measurable impacts on pupils' learning. (Makopoulou & Armour, 2014). Perhaps unsurprisingly, the focus of research has shifted to attempting to measure, empirically, the impact of PLCs on teachers' practices and pupils' learning in order to guide CPD investments (James & McCormick, 2009) although Guskey and Yoon (2009, p. 498) remain concerned that robust evidence on CPD impact is "in dreadfully short supply".

Funding has been made available for large-scale studies of effectiveness, especially in the USA (e.g. Garet, et al., 2001). It is, however, difficult to compare these studies given that they all tend to measure different things with variations in subject area, teachers' characteristics, pupils' characteristics etc (Borko, 2004; Hill et al., 2013). In a comprehensive review, Yoon et al. (2007) identified only nine studies (out of the 1300 reviewed) that set out to explore or measure impact on pupil learning and that met the What Works Clearinghouse evidence standards. There was some evidence to suggest that CPD can have positive impact on student achievement when it engages teachers for longer than 14 hours, but there is no clarity on how the hours should be organised to be

optimally effective, where teacher learning should take place, or which aspect (e.g., duration, follow up meetings, school-based coaching) of the CPD intervention led to positive outcomes. Coaching (or mentoring) is a CPD form that requires substantial investment but recent findings from the USA have been ambivalent about its effectiveness. In short, many existing studies lack explanatory power for practice.

A study by Neuman and Cunningham (2009) is illustrative of the challenges faced in 'measuring' CPD effectiveness. This experimental study found that there were improvements in the practices of language and literacy teachers who participated in a CPD programme that included follow-up coaching, as compared to those who simply engaged in the original programme. What is interesting, however, is the section on research limitations. For example, the authors note the challenges associated with modest statistical power and comment: "This is a common challenge in studies where classrooms are the appropriate level of analysis" (p. 591). They also report that "given our design, we cannot determine which curriculum components or aspects of the professional development model accounted for particular outcomes" (p. 592). Perhaps of even greater concern, the authors comment that the *quantity* of the coaching support in the project was considerably higher than is the norm in CPD. There are serious questions to be asked, therefore, about the value of this research for wider learning about effective CPD.

In PE-CPD, only a small number of studies have sought to systematically link PE-CPD with specific teacher or pupil learning outcomes (e.g. Hanuk, Ince & Tannehill, 2012; McKenzie et al., 1997; Aelterman et al., 2013). Indeed, in the highly topical area of promoting physical activity for health, numerous authors have found that PE teachers have low levels of knowledge and very little CPD, so are unable to support pupils' learning optimally (Castelli & Williams, 2007; Ward, 2009, Armour 2013). McKenzie and Lounsbery (2009) draw on a large programme of research to argue: "Colleges and universities should provide professional preparation programs that produce teachers who are highly qualified to **deliver** evidence based physical education and health education

programs" (p. 224, our emphasis). Yet, these authors appear to view teachers in a similar way to those outlined earlier in this paper: as the deliverers of knowledge created elsewhere. The question to be addressed, therefore, is whether that is an approach that is likely to meet the needs of contemporary physical education?

Section two: contemporary physical education

In a forthcoming PE pedagogy handbook (Ennis, in press) leading researchers were asked to outline their views on the current and future challenges of educating teachers 'effectively' across the career 'continuum'. In this discussion on the nature of contemporary PE, it is interesting to consider their responses. For example, in a chapter on the effectiveness of initial teacher education, McCuaig and Enright (in press) point out that the concept of 'effectiveness' is contingent on a number of contextual factors. They draw on Hunter's (1994) notion of 'principled positions' to remind us that different positions "cohere around the notion of an ideal formation of the person" (p. xv). For example, throughout history, debates in PE have centred on the relative importance of physical prowess, gender politics, status issues, health, motor/sports competence, and/or a socially critical knowledge perspective. The key point they make is that viewing PE from these different positions leads to different notions of 'effective' PE-CPD and different accountability measures.

In other future-focussed chapters in the same handbook, [Masked for peer review] (in press) highlight the implications for understanding CPD effectiveness when the focus is on the development of inclusive pedagogies or health-related aspects of PE. For example, Haerens et al (in press) draw on a study by Aelterman et al (2013) to make the important point that teachers need to learn about health in ways that acknowledge the complex influences of their personal convictions. A common theme running through all the chapters is that CPD 'effectiveness' is a somewhat slippery concept that needs to be understood in terms of teacher engagement in the process, the challenges of the context and the privileging of certain positions and voices in and beyond the profession. In the wider educational research, Hill et al (2013) conclude that the approaches taken

so far have been *ineffective* because researchers have failed to offer a robust understanding of the nature of more, or less, effective practice. Moreover, Ball (2012) has argued that we lack the kinds of *mechanisms* needed to bridge this gap between research and practice.

The persistent gap between theory/research-practice is important. It undermines attempts to develop practice underpinned by robust evidence and, equally important, research driven by a practice-led agenda. Moreover, this is linked to questions about the nature of 'effective' CPD because, by definition, 'contemporary physical education' is a dynamic concept. Three examples illustrate this point. The first is from [Masked for peer review] (2014) who describe the life of William as 'A 15-year-old sport-crazy Millennial in Ireland'. From a digital humanities perspective, these authors identify ways in which the lives of William and his friends differ from those of previous generations, particularly in the use (and abuse) of digital technologies. The authors point to the importance of digital literacy for physical educators (rather than the uncritical use of technology) to ensure they can support young learners to navigate the digital world in positive ways.

It has been argued that education has largely retained a traditional face-to-face transmission model of learning whereas digital technologies have the capacity to offer new ways that can better meet young learners' needs (Mehenna, 2004). Indeed, in his work on pedagogy, technology and change, Fullan (2013) positions technology, in the hands of skilled and motivated practitioners, as a potential 'accelerator' of learning. In the words of Gibson (2010), the role of the 21st century teacher is "To help young people know where to find knowledge, to know what to do with it when they get it, to know 'good' knowledge from 'bad' knowledge … in other words all the things computers can't do yet" (p. 24). What we might conclude from this is that part of the dynamism of contemporary PE (for the foreseeable future) is linked to digital technologies in the hands of trained teachers and if CPD is to be considered 'effective' for contemporary PE, this should be a prominent theme.

The second example links to the earlier points made about the role of contemporary PE in physical activity/health agendas. Finding new ways to encourage individuals to engage in physical activity through the life-course is acknowledged as a contemporary global health challenge (Trost, Blair & Khan, 2014). National Governments have issued a series of physical activity guidelines (cf. the UK Department of Health, 2011) yet data on physical activity levels in both the youth and adult populations suggest that current practices are failing many young people (WHO, 2010). Although it is generally understood that PE alone cannot be the solution to this problem, nor can PE be reduced to mere exercise delivery, it is difficult to see how contemporary PE can ignore the societal prominence of the physical activity for health agenda.

This is another example of an area of education where knowledge is changing fast; moreover, it is a multi-faceted problem that, in practice, should be addressed in interdisciplinary ways. Yet, referring back to the research-practice gap identified earlier, there are few examples of sustained efforts to ensure that (a) the most up-to-date evidence from a range of sub/disciplines is readily available to PE teachers; and (b) that teachers have any engagement in the determination of research agendas in those areas that could support their professional judgements. In a recent attempt to bridge persistent research-practice gaps, teams of scholars from around the world collaborated to develop prototype 'pedagogical cases' [Masked for peer review], comprising of multidisciplinary analyses of individual young learners in PE and youth sport. Looking across these first twenty cases, a key point that was illustrated consistently was the influence of macro and micro contexts that constrained and enabled young people's engagement in sport, physical activity and PE in so many complex ways. For contemporary PE teachers, therefore, we could conclude that effective CPD is grounded in a deep analysis of societal and local context, and would equip teachers with knowledge and skills to challenge the plethora of simplistic 'exercise prescription' approaches. This is important if teachers are to meet the diverse learning needs of all their pupils

and, in turn, equip them to become discerning consumers of the burgeoning fitness/health industry rather than victims of its latest fad or fashion.

The third example of the dynamism of contemporary PE can be encapsulated as the 'complexity of learning'. This theme underpins the previous two examples and, given that teaching is a learning profession, it could be argued that it is at the heart of any discussion on effective CPD. Yet, inexplicably, the development of theories about learning is not often aligned to practice contexts (Quennerstedt, Öhman & Armour, 2014a). PE-CPD is regularly designed and delivered in ways that flout everything that is known about effective learning (Armour 2004; 2007); and research in PE rarely makes explicit the learning theories that underpinned the design or methods of a study. As Quennerstedt, et al (2014a) have argued:

> Learning is at the heart of pedagogy, and physical education teachers as well as sport coaches are essentially pedagogues. Pedagogy is, however, a complex concept [and] the number of variables operating in any pedagogical encounter is vast…so in order to study *learning*, we require clear frameworks simply to make sense of what is happening (p. 886)

Quennerstedt et al (2014b) reported findings from a project where they video-recorded a series of PE lessons. They selected sequences that they termed 'didactic moments' in order to explore issues of learning in greater detail. They were able to illustrate vividly key characteristics of learning in PE lessons in progress; for example: the ways in which (i) learning in PE is practical and embodied; (ii) individual experiences are an inherent feature of the learning process; (iii) wider cultural influences enter and become part of the learning process; and (iv) power relations have a profound influence on the dynamics of the learning process. The complex learning picture that emerges from this analysis of short lesson sequences is both insightful and exciting; yet, it is simply indicative of the complexity of all pedagogical encounters (Leach & Moon, 1999) and it provides rich material for teacher learning. There are few opportunities, however, for PE teachers to engage in this type of layered analysis so, too often, the intriguing mix of embodiment, individual experience, culture and power that are at the heart of their everyday practices goes

unremarked.

We would argue that effective PE-CPD for contemporary PE teachers would be underpinned by a strong refocus on the dazzling complexity of learning. Greene (1995) argued that we should encourage a view of 'teachers as strangers' who seek to view their teaching through 'fresh eyes' in order to think of it anew. Greene described this as a state of 'wide-awakeness'; i.e. seeing the strange in the familiar. This seems to encapsulate the arguments we are making about the importance of a learning focus in effective PE-CPD.

There are many other examples that we could have used to illustrate characteristics of contemporary PE and their implications for PE-CPD. These are, however, merely symptoms of deeper questions about teachers as learners. A key question remains unanswered: how can we move away from the ineffective CPD that is routinely offered *despite* strong evidence that it is likely to be unsatisfactory for many teachers and, by default, their pupils. It seems that neither evidence nor prescriptive structures are enough to win this argument. Instead, we argue that what is needed is a different conceptual framework that leads to a radical reconceptualization of teachers as learners. *This, we argue, could be a starting point for the development of new policies for and models of CPD.* Using the lens of Dewey's theory of education as growth, therefore, we propose a different approach to PE-CPD that places *learning* and *context* at its core, and we consider its implications.

Section three: a Deweyan framework

Dewey's theories regarding experiences, learning, interaction, reflection and how education is connected to issues of democratic societies are deeply embedded in the work of numerous theorists in the field of education and CPD (cf. Biesta & Burbules, 2003; Hansen, 2012; Armour, 2010). Here, we argue that the practical implications of his theorising deserve further consideration in the context of PE. In this section, therefore, we provide an overview of key concepts from Dewey's work, and we then consider them afresh to offer additional insights into questions about effective

PE-CPD. We start at what we consider to be Dewey's key contribution to this debate: the notion of education as growth.

Growth and (Professional) Development

In using the concept of growth to elucidate education, Dewey (1916) challenged prevailing assumptions that development has a fixed direction and a finished identity where: "[t]he goal is conceived of as completion, perfection. Life at any stage short of attainment to this goal is merely an unfolding toward it" (Dewey, 1916, p. 61). Dewey argued that development is often understood as a passive process that is judged against 'fixed standards' established by others, rather than against intrinsic goals. In this way, achievement is always related to a predefined end goal which, for Dewey (1916) is highly problematic. Once the end point is reached, no more development is necessary or even possible and this appears to be antithesis of the concept of lifelong learning that forms the rhetoric of policies on CPD for teachers.

Pekarsky (1990) acknowledged that Dewey's theorising on 'growth' has been interpreted in many different and controversial ways in the literature. What seems to be widely accepted, however, is that Dewey (1916) was a strong advocate of 'anti-foundationalism'; an understanding of education as having transformative power rather than one of seeking to establish – or transmit – unquestionable metaphysical 'truths'. Dewey used this understanding as the basis of a powerful critical account of the educational system of his time. This system relied predominantly on the transmission of fixed subject matter drawn from scholarly sources which students were expected to memorise and internalise. In this traditional model, Dewey (1902, p. 13) argued:

> The child is simply the immature being who is to be matured; he is the superficial being who is to be deepened; his narrow experiences which are to be widened. It is his to receive, to accept. His part is fulfilled when he is ductile and docile.

Dewey was concerned that when students are passive in the learning process and are directed towards achieving a pre-ordained end point, possibilities for further growth and innovation are stifled. It is interesting, therefore, to substitute 'children' with 'teachers' in this argument, and to

consider the nature of effective CPD from Dewey's anti-foundationalist perspective. In particular, the notion of 'continuing' would appear to be axiomatic.

Dewey took his arguments about development further, arguing somewhat counter-intuitively, that "the fulfilment of growing is taken to mean an accomplished growth, that is to say, an ungrowth" (Dewey, 1916, p. 36) that can lead to "lack of interest in the novel, aversion to progress, and dread of the uncertain and the unknown" (p. 43). For Dewey, 'growth' is one of the aims of education. Growth in this sense cannot be understood as a finite achievement but instead is an on-going (continuous) process. Indeed, Dewey argued that "life is growth" (1916, p. 43) which means that change must be regarded as the norm for all individuals, irrespective of age, because we are always unfinished participants in an unfinished world (1938a). In this sense, a PE teacher can never be considered as a finished teacher, but instead always in the process of becoming a teacher. This perspective aligns well with the essential dynamism of contemporary PE.

Development and Continuity

Dewey (1938a; 1916) expressed his ideas about 'education as growth' as *a continual process of becoming*. Moreover, one of the fundamental conditions of growth, according to Dewey (1916), is learning from experience. He wrote:

> An experience is capable of generating and carrying any amount of theory (or intellectual content), but a theory apart from an experience cannot be definitely grasped even as theory. (p. 118)

In other words, from a Deweyan perspective, the persistent gaps between theory-practice in PE and PE-CPD that were illustrated earlier make little conceptual (or practical) sense. In short, theory relies upon practice as practice relies upon theory. Dewey (1916) also challenged prevailing dualisms (e.g. body/mind) that he believed afflicted the field of education. Conceptualising the notion of experience more broadly, Dewey suggested that only when bodily activities are understood as part of (or embedded in) the meaning-making processes, would learners be able reach deep and rich understandings. In essence, thinking and doing are bonded together in a mutual

and simultaneous dialogical relation (cf. Quennerstedt et al., 2011). It is interesting to consider what PE-CPD would look like if this perspective had prevailed.

Dewey further argued that ideas are not fixed but are formed and reformed through experience. In the Deweyian sense, therefore, 'growth' is understood as an on-going process of *constant reconstruction of experiences* in ways that enable individuals to make sense of even broader realms of experiences and to develop increasingly diverse responses in dealing with the environment (Pekarsky, 1990). This notion of forming and reforming transcends standard questions about optimal CPD structures, and the traditional binaries of passive information-giving versus active engaged activities. Instead, Dewey highlights the active role of teachers as learners in *all* learning experiences. It could be argued, therefore, that we have been asking the wrong questions about PE-CPD. It is not the CPD structure, activity or approach that is of primary importance, but characteristics of the teacher as learner (cf. Petersen, 1996).

This point is illustrated further in Dewey's (1916) arguments about the nature and quality of current learning experiences and their influence on how humans understand and learn in subsequent experiences. This was theorized by Dewey as the principle of *continuity of experience* and it has particular resonance for this discussion. Dewey (1938a) explained it as follows:

> The principle of continuity of experience means that every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after…The process goes on as long as life and learning continues (p. 27).

'Continuity of experience' involves bringing something from the past into current experiences and also modifying experiences to come (Dewey, 1938a). This is what Dewey (1916) called 'interdependence' of the learner and the environment: both the person experiencing and what is experienced have the potential for change. This active reconstruction of experiences leads to new meanings, new actions and new habits creating a tension between, what Lehmann-Rommel (2000) calls 'what is certain' – that is the ingrained constructions – and 'what is possible' – the reflective, novel constructions. This argument links well with the points made earlier about the complexity of

learning in PE lessons. It also adds something more: the idea that effective CPD would create tension between what is certain and what is possible. Herein lies a framework for a critical positioning of the contested health/physical activity agenda in the PE curriculum.

Dewey also envisioned growth to be embedded in everyday lives and to be on-going, and he labelled this learners' 'plasticity' (1916). Dewey (1916) described plasticity as:

> … the power to retain from one experience something which is of avail in coping with the difficulties of a later situation. This means power to modify actions on the basis of the results of prior experiences, the power to develop dispositions (p. 38).

For PE-CPD, a focus on teachers' learning plasticity and the production of new ideas is at the opposite end of the spectrum from viewing teachers as the recipients of knowledge created elsewhere. Moreover, it reminds us that teachers are never passive in the learning process even though may appear to be so. For example, in his classic work, Sparkes (1987) illustrated vividly the adept ways in which PE teachers managed to give the impression of being compliant with system requirements by adopting what he termed 'strategic rhetoric', while actively maintaining their personal – and often opposing – beliefs and actions.

It is further important to recognise that for Dewey, the meaning of the concept of experience was not self-evident. He argued that not all experiences are genuinely or equally educative; indeed some experiences can restrict or 'narrow the field' of future experiences, and thus be detrimental to further growth. Dewey (1938a) argued that although a given experience may enhance a person's skills (in the short term) it might, at the same time, "tend to land him in a groove or rut" (p. 26). On the other hand, he also noted that experiences that arouse curiosity and open up horizons create the conditions for further growth. Effective PE-CPD from this perspective is that which nourishes teachers as curious, dynamic, creative and continuous learners. Instead of attempting to design CPD with a set of fixed ends or, perhaps, tightly specified 'learning outcomes', this perspective would focus on the development of teachers' 'ends-in-view' (Dewey 1938b). Specific CPD activities could only be regarded as educative if they promoted an appetite and aptitude for, and

engagement in, further learning. Taking this perspective certainly points to the banality of the traditional process of CPD evaluation that seeks to evaluate learning through 'opinionnaires' distributed immediately after a CPD activity.

In summary, Dewey's (1916) theory can be encapsulated in his view that the purpose of education is to:

> Ensure the continuance of education by organising the powers that insure growth. The inclination to learn from life itself and to make the conditions of life such that all will learn in the process of living is the finest product of schooling (p. 43).

This statement places – at centre stage – the notions of development and continuity in learning and it provides a sound platform from which to consider PE-CPD afresh.

Effective CPD for contemporary PE teachers?

We have illustrated different ways in which 'effectiveness' in the context of PE teachers' CPD is rarely a neutral term – politically or educationally. Nor can it be an abstract term given its embeddedness in societal aspirations in specific time, space and place (the earlier examples of physical activity/health and digital technologies in PE are illustrative). Moreover, the dazzling complexity of learning provides a compelling focus for CPD, while Dewey's concepts of education as *growth,* learners' plasticity and the essential continuity of experience provide depth, content and rich colour.

From this standpoint, it is easy to see why instrumental CPD imposed on teachers by others will often fail to achieve what was intended. In essence, the instrumental CPD model takes an overly simplistic and static view of teachers as learners. As Hodkinson, Biesta and James (2008) argued (following Dewey):

> … learning can change and/or reinforce that which is learned, and can change and/or reinforce the habitus of the learner. In these ways, a person is constantly learning through becoming, and becoming through learning. (p. 41)

It is here we argue that answers to questions about effective CPD for contemporary PE teachers can be found. As noted earlier, 'contemporary' is a dynamic concept that aligns well with the notion of education as growth. A Deweyan educative experience prepares learners for a life of knowing and learning. This could be regarded as a worthy and wholly appropriate conceptual framework for CPD in any profession; but in the learning profession that is teaching, it is surely axiomatic. Indeed, from a Deweyan perspective, CPD policies that express the aspiration for teachers to be 'lifelong learners' are merely stating the obvious: teachers will learn as long as they have life.

'Effective' PE-CPD is unlikely to be found in policies, structures and processes that are built on inadequate understandings of teachers as complex and lifelong learners; nor in one form of content applied to teaching or another. Furthermore, except in the case of simple skill learning tasks or information-giving activities, it is unlikely that the effectiveness of any particular CPD activity will be captured in a single set of measurements, whether organised into a randomised control trial or not. Instead, effective PE-CPD is that which nurtures and protects the career-long growth of professional practitioners as learners who are, in turn, able to nurture the growth of pupils in PE. So, despite the emphasis on *teachers* in formal CPD policies, it is pupils, the dazzling complexity of the *learning* process, the constraints and opportunities of the *context* and its contemporary challenges, and robust theory/research that should provide the framework for effective professional learning. In this endeavour, the need to attend to the 'growth' of pupils enters the CPD framework; i.e. to ensure they are in a learning process of becoming something beyond a fixed end point.

The importance of focussing on *contemporary* challenges for PE is a key factor in our argument and we have drawn on the illustrative examples of digital technologies, physical activity for health, and a layered approach to understanding learning. Effective CPD, therefore, is about supporting teachers to learn as they gain experience over time and through different contemporary

times, so they can support their young (and by definition contemporary) learners. As Dewey described it:

> Experience, in short, is not a combination of mind and world, subject and object, method and subject matter, but a single continuous interaction of a great diversity (literally countless in number) of energies (Dewey 1916, p. 167).

Put this way, PE-CPD can be understood as a compelling activity that has the potential to really engage teachers. Equally important, this view of CPD makes it apparent that the core focus of CPD is practice itself (i.e. embedded and contextualised); learning is dynamic (active and requiring time for reflection); and it is never ending (continuing). The implications for CPD structure and organisation are likely to be extensive, requiring further theorising and research to design, pilot and embed new approaches. This paper can only be regarded as a starting point in that next phase of work.

Conclusion

As we illustrated in section one of this paper, there is now a large body of research on CPD and PE-CPD. Yet, to date, this research has failed to find the key to 'effective' CPD. Indeed, there is a tendency for both research and policy to identify lists of actions to be taken to deliver high quality CPD. The ambition of this paper, therefore, was to take a step back and to consider whether we are approaching questions about teachers' CPD from the most appropriate starting point.

We employed the work of John Dewey to help us to consider afresh questions about contemporary PE-CPD because of his focus on 'continuity'. Dewey is also one of a small group of influential theorists whose work has remained relevant over time. We have argued that a Deweyan framework for PE-CPD would encourage us to (i) recognize the dazzling complexity of the learning process, (ii) understand context and contemporary challenges; (iii) seek to bridge research/theory-practice in innovative ways; and (iv) focus on nurturing the career-long *growth* of PE teachers. Clearly this framework requires further development over time and in this paper we simply offer a conceptual starting point for alternate thinking. Moreover, if CPD is considered in

terms of teachers' continual growth where they learn to learn and develop their critical judgment, we look forward, for example, to considering the impact of a Deweyan framework on the ways in which CPD could be evaluated as 'effective'.

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